LINKER

```
LL          NN      NN  KK      KK  SSSSSSSS  TTTTTTTTTT      AAAAAA    TTTTTTTTTT  SSSSSSSS   000000
LL          NN      NN  KK      KK  SSSSSSSS  TTTTTTTTTT      AAAAAA    TTTTTTTTTT  SSSSSSSS   000000
LL          NN      NN  KK    KK    SS            TT        AA      AA      TT      SS       00      00
LL          NN      NN  KK  KK      SS            TT        AA      AA      TT      SS       00      00
LL          NNNN    NN  KK  KK      SS            TT        AA      AA      TT      SS       00      00
LL          NNNN    NN  KK  KK      SS            TT        AA      AA      TT      SS       00      00
LL          NN  NN  NN  KKKKKK      SSSSSS        TT        AA      AA      TT      SSSSSS   00      00
LL          NN  NN  NN  KKKKK       SSSSSS        TT        AA      AA      TT      SSSSSS   00      00
LL          NN    NNNN  KK  KK          SS        TT      AAAAAAAAAA        TT          SS   00      00
LL          NN    NNNN  KK  KK          SS        TT      AAAAAAAAAA        TT          SS   00      00
LL          NN      NN  KK    KK        SS        TT      AA      AA        TT          SS   00      00   ....
LL          NN      NN  KK    KK        SS        TT      AA      AA        TT          SS   00      00   ....
LLLLLLLLLL  NN      NN  KK      KK  SSSSSSSS      TT      AA      AA        TT      SSSSSSSS   000000      ....
LLLLLLLLLL  NN      NN  KK      KK  SSSSSSSS      TT      AA      AA        TT      SSSSSSSS   000000      ....

LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II              SS
LL                II              SS
LLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLL      IIIIII      SSSSSSSS
```

```
0001  0  module lnk_statsout                              ! LINKER STATISTICS ROUTINE
0002  0            (ident = 'V04-000'
0003  0            ,addressing_mode
0004  0                 (external    = general
0005  0                 ,nonexternal = long_relative
0006  0                 )
0007  0            ) =
0008  1  begin
0009  1
0010  1  !********************************************************************
0011  1  !*                                                                  *
0012  1  !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                         *
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0028  1  !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.         *
0029  1  !*                                                                  *
0030  1  !*                                                                  *
0031  1  !********************************************************************
0032  1  !++
0033  1  ! FACILITY:      LINKER
0034  1  !
0035  1  ! ABSTRACT:      ROUTINE DOES ALL THE WORK OF GATHERING AND OUTPUTTING STATISTICS OF THE LINK
0036  1  !
0037  1  !
0038  1  ! ENVIRONMENT:   STARLET NATIVE MODE
0039  1  !
0040  1  ! AUTHOR:        T.J. PORTER, CREATION DATE: 27-JUN-77
0041  1  !
0042  1  ! MODIFIED BY:
0043  1  !
0044  1  !     V03-002 ADE0001         Alan D. Eldridge       14-Aug-1984
0045  1  !             Only output the options file contents if a full map
0046  1  !             is requested.
0047  1  !
0048  1  !     V03-001 JWT0099         Jim Teague             14-Mar-1983
0049  1  !             New CLI interface.
0050  1  !
0051  1  !--
0052  1  !
0053  1  ! TABLE OF CONTENTS:
0054  1  !
0055  1  forward routine
0056  1      lnk$statsout : novalue;                      ! OUTPUT THE STATISTICS
0057  1  !
```

LNK_STATSOUT   C 11
V04=000   16-Sep-1984 00:33:36   VAX-11 Bliss-32 V4.0-742   Page 2
                                                       14-Sep-1984 12:40:36   [LINKER.SRC]LNKSTATSO.B32;1   (1)

```
    58    0058  1 ! INCLUDE FILES:
    59    0059  1 !
    60    0060  1 library 'LIBL32';                                     ! GET PROCESS HEADER DEFINITIONS
    61    0061  1
    62    0062  1 require 'PREFIX';                                     ! USEFUL MACROS AND VARIABLES
    63    0177  1
    64    0178  1 library 'DATBAS';                                     ! LINKER DATA STRUCTURES
    65    0179  1
    66    0180  1 sd ('$LINE');
    67    0181  1 !
    68    0182  1 ! MACROS:
    69    0183  1 !
    70    0184  1 macro
    71    0185  1     textadr = 0,0,32,0%,
    72    0186  1     fltsadr = 1,0,32,0%,
    73    0187  1     cputadr = 2,0,32,0%,
    74    0188  1     stimadr = 3,0,32,0%;
    75    0189  1 !
    76    0190  1 ! EQUATED SYMBOLS:
    77    0191  1 !
    78    0192  1 literal
    79    0193  1     bufferleng = 132;                                 ! OUTPUT LINE BUFFER
    80    0194  1 !
    81    0195  1 ! EXTERNAL REFERENCES:
    82    0196  1 !
    83    0197  1 external
    84    0198  1     lnk$gl_optextp : ref block [, byte],              ! POINTER TO OPTIONS TEXT
    85    0199  1     lnk$gl_ctlmsk : block [, byte],                  ! LINK CONTROL FLAGS
    86    0200  1     lnk$gl_minaddr,                                  ! LOWEST ADDRESS ALLOCATED
    87    0201  1     lnk$gl_memlhd,                                   ! FREE MEMORY LISTHEAD
    88    0202  1     lnk$gl_cpustim,                                  ! CPU TIME AT START
    89    0203  1     lnk$gl_futlsrch,                                 ! NUMBER OF SYMBOLS SEARCHED FOR IN THE WRONG LIBRARY
    90    0204  1     lnk$gl_librecs,                                  ! NUMBER OF OBJ RECORDS READ FROM LIBRARIES
    91    0205  1     lnk$gl_nmodsexp,                                 ! NUMBER MODULES EXTRACTED EXPLICITLY
    92    0206  1     lnk$gl_nmodsrch,                                 ! NUMBER OF MODULES EXTRACTED TO RESOLVE SYMBOLS
    93    0207  1     lnk$gl_objrecs,                                  ! TWO PASS COUNT OF OBJECT RECORDS READ
    94    0208  1     lnk$gw_dbgrecs : word,                           ! NUMBER OF DEBUG DATA RECORDS
    95    0209  1     lnk$gl_dbgestim,                                 ! NUMBER OF BYTES IN DEBUG RECORDS
    96    0210  1     lnk$gw_dstvbn : word,                            ! VBN OF DEBUG SYMBOL TABLE
    97    0211  1     lnk$gw_dstblks : word,                           ! NUMBER OF BLOCKS ALLOCATED
    98    0212  1     lnk$gl_dstend,                                   ! END ADDRESS IN THE DST
    99    0213  1     lnk$gw_symrecs : word,            ! NUMBER OF GLOBAL SYMBOL TABLE RECORDS WRITTEN TO SEPARATE FILE
   100    0214  1     lnk$gw_gstrecs : word,                           ! NUMBER WRITTEN TO IMAGE FILE
   101    0215  1     lnk$gq_startim,                                  ! START TIME QUADWORD
   102    0216  1     lnk$gq_endtim,                                   ! END TIME QUADWORD
   103    0217  1     lnk$gq_ps1stim,                                  ! PASS 1 START TIME
   104    0218  1     lnk$gq_alostim,                                  ! ALLOCATION/RELOCATION START TIME
   105    0219  1     lnk$gq_ps2stim,                                  ! PASS 2 START TIME
   106    0220  1     lnk$gq_mapstim,                                  ! BULK OF MAP START TIME
   107    0221  1     lnk$gq_stbstim,                                  ! SYMBOL TABLE OUTPUT START TIME
   108    0222  1     lnk$gl_ps1cput,                                  ! CPU TIME AT START OF PASS 1
   109    0223  1     lnk$gl_alocput,                                  ! CPU TIME AT START OF ALLOCATION PHASE
   110    0224  1     lnk$gl_ps2cput,                                  ! CPU TIME AT START OF PASS 2
   111    0225  1     lnk$gl_mapcput,                                  ! CPU TIME AT START OF MAP OUTPUT
   112    0226  1     lnk$gl_stbcput,                                  ! CPU TIME AT START OF SYMBOL TABLE OUTPUT
   113    0227  1     lnk$gl_ps1flts,                                  ! PAGE FAULT COUNT AT START OF PASS 1
   114    0228  1     lnk$gl_aloflts,                                  ! PAGE FAULT COUNT AT START OF ALLOCATION PHASE
```

```
  115      0229   1          lnk$gl_ps2flts,                                          ! PAGE FAULT COUNT AT START OF PASS 2
  116      0230   1          lnk$gl_mapflts,                                          ! PAGE FAULT COUNT AT START OF MAP OUTPUT
  117      0231   1          lnk$gl_stbflts,                                          ! PAGE FAULT COUNT AT START OF SYMBOL TABLE OUTPUT
  118      0232   1          lnk$gl_spagflts,                                         ! PAGE FAULT COUNT AT START OF THE LINK
  119      0233   1          lnk$gl_endflts,                                          ! PAGE FAULT COUNT AT END
  120      0234   1          lnk$gl_endcput;                                          ! CPU TIME AT END
  121      0235   1
  122      0236   1   external routine
  123      0237   1          cli$get_value,
  124      0238   1          lnk$calcelaps,                                           ! ROUTINE TO DO THE QUADWORD ARITHMETIC
  125      0239   1                                                                   ! RETURNING ADDRESS OF THE NEGATIVE ("DELTA") ELAPSED TIME
  126      0240   1          lnk$mapout;                                              ! OUPUTS LINE TO MAP
  127      0241   1
  128      0242   1   external literal
  129      0243   1          len$c_mapline : wordlit,                                 ! LENGTH OF MAP LINE
  130      0244   1          lnk$k_libblocks : short;                                 ! NUMBER OF BLOCKS IN WINDOW OF A LIBRARY
  131      0245   1
  132      0246   1   literal
  133      0247   1          phases = 9;                                              ! NUMBER OF PHASES FOR WHICH THERE ARE STATISTICS
  134      0248   1
  135      0249   1   !
  136      0250   1   ! MODULE OWN STORAGE:
  137      0251   1   !
  138      0252   1   own
  139      0253   1          command_desc : dynamic_descriptor;
  140      0254   1   psect
  141      0255   1          own = $split$(nopic, concatenate, local, noshare, noexecute, nowrite);
  142      0256   1   own
  143      0257   1          phastahd1 : descriptor ('!50<Performance Indicators!>Page Faults      CPU Time           Elapsed Time'),
  144      0258   1          phastahd2 : descriptor ('!50<!22*-!>!11*-      !8*-     !12*-'),
  145      0259   1          phastafmt : descriptor ('!50<!AS!>!11UL      !2ZL.!2ZL.!2ZL.!2ZL      !%T'),
  146      0260   1          totaltim : descriptor ('Total run values:'),
  147      0261   1          comandtim : descriptor ('       Command processing:'),
  148      0262   1          pass1tim : descriptor ('       Pass 1:'),
  149      0263   1          alloctim : descriptor ('       Allocation/Relocation:'),
  150      0264   1          pass2tim : descriptor ('       Pass 2:'),
  151      0265   1          maptim : descriptor ('       Map data after object module synopsis:'),
  152      0266   1          stbtim : descriptor ('       Symbol table output:'),
  153    P 0267   1          workset : descriptor (
  154      0268   1                   'Using a working set limited to !UL pages and !UL pages of data storage (excluding image)'),
  155      0269   1          objrecs : descriptor ('!50<Total number object records read (both passes):!>!UL'),
  156    P 0270   1          librecs : descriptor (
  157      0271   1                   '        of which !UL were in libraries and !UL were DEBUG data records containing !UL bytes')
  158    P 0272   1          dbgdata : descriptor ('!UL bytes of DEBUG data were written,starting at VBN !UW with !UW blocks allocate
  159      0273   1                   ),
  160      0274   1          extrmods : descriptor ('!50<Number of modules extracted explicitly!> = !UL'),
  161      0275   1          srchmods : descriptor ('        with !UL extracted to resolve undefined symbols'),
  162      0276   1          futlsrch : descriptor ('!UL library searches were for symbols not in the library searched'),
  163      0277   1          symrecs : descriptor ('A total of !UL global symbol table records was written'),
  164      0278   1          phastatbl : blockvector [phases, 4] initial (
  165      0279   1                   0           ,lnk$gl_spagflts,lnk$gl_cpustim,lnk$gq_startim,
  166      0280   1                   comandtim,lnk$gl_ps1flts,lnk$gl_ps1cput,lnk$gq_ps1stim,
  167      0281   1                   pass1tim,lnk$gl_aloflts,lnk$gl_alocput,lnk$gq_alostim,
  168      0282   1                   alloctim,lnk$gl_ps2flts,lnk$gl_ps2cput,lnk$gq_ps2stim,
  169      0283   1                   pass2tim,lnk$gl_mapflts,lnk$gl_mapcput,lnk$gq_mapstim,
  170      0284   1                   maptim,lnk$gl_stbflts,lnk$gl_stbcput,lnk$gq_stbstim,
  171      0285   1                   stbtim,lnk$gl_endflts,lnk$gl_endcput,lnk$gq_endtim,
```

LNK_STATSOUT
V04=000

E 11
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14-Sep-1984 12:40:36   [LINKER.SRC]LNKSTATSO.B32;1

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```
:  172        0286  1                          0        ;lnk$gl_spagflts,lnk$gl_cpustim,lnk$gq_startim,
:  173        0287  1                                   totaltim,lnk$gl_endflts,lnk$gl_endcput,lnk$gq_endtim),
:  174        0288  1        cvt2secs : initial (100)
:  175        0289  1        cvtsecsmins : initial (60);
:  176        0290  1
```

```
 178    0291  1  global routine lnk$statsout : novalue =          ! OUTPUT STATISTICS
 179    0292  2      begin
 180    0293  2  !++
 181    0294  2  ! FUNCTIONAL DESCRIPTION:
 182    0295  2  !
 183    0296  2  !     THIS MODULE COMPUTES AND OUTPUTS TO THE MAP A GAGGLE OF THE STATISTICS
 184    0297  2  !     ACCUMULATED BY THE LINKER AND THE SYSTEM DURING THE RUN
 185    0298  2  !
 186    0299  2  !
 187    0300  2  ! FORMAL PARAMETERS:
 188    0301  2  !
 189    0302  2  !     NONE
 190    0303  2  !
 191    0304  2  ! IMPLICIT INPUTS:
 192    0305  2  !
 193    0306  2  !     NONE
 194    0307  2  !
 195    0308  2  ! IMPLICIT OUTPUTS:
 196    0309  2  !
 197    0310  2  !     NONE
 198    0311  2  !
 199    0312  2  ! ROUTINE VALUE:
 200    0313  2  ! COMPLETION CODES:
 201    0314  2  !
 202    0315  2  !
 203    0316  2  !     NONE
 204    0317  2  !
 205    0318  2  ! SIDE EFFECTS:
 206    0319  2  !
 207    0320  2  !     NONE
 208    0321  2  !
 209    0322  2  !--
 210    0323  2      builtin
 211    0324  2          ediv;
 212    0325  2
 213    0326  2      local
 214    0327  2          buffer : ch$sequence (bufferleng),     ! OUTPUT LINE BUFFER
 215    0328  2          outbufdesc : vector [2],               ! ITS DESCRIPTOR
 216    0329  2          pagefaults,
 217    0330  2          cputime : vector [2],
 218    0331  2          secfrac,
 219    0332  2          cpusecs : vector [2],
 220    0333  2          cpumins : vector [2],
 221    0334  2          cpuhours,
 222    0335  2          worksetlim,
 223    0336  2          memused : ref vector,
 224    0337  2          dbgbytes,
 225    0338  2          outlineleng : word;                    ! LENGTH OF FORMATTED LINE RETURNED BY FAO
 226    0339  2
 227    0340  2      outbufdesc [0] = bufferleng;               ! INITIALIZE FAO'S BUFFER
 228    0341  2      outbufdesc [1] = buffer;                   ! DESCRIPTOR
 229    0342  2      cputime [1] = 0;
 230    0343  2      cpusecs [1] = 0;
 231    0344  2      cpumins [1] = 0;
 232    0345  2      lnk$mapout (buffer, 0);
 233    0346  2      $fao (phastahd1, outlineleng, outbufdesc);
 234    0347  2      lnk$mapout (buffer, .outlineleng);
```

```
 235        0348    2               $fao (phastahd2, outlineleng, outbufdesc);
 236        0349    2               lnk$mapout (buffer, .outlineleng);
 237        0350
 238        0351    2               incr i from 1 to phases - 1 do
 239        0352
 240        0353    2                   if .phastatbl [.i, textadr] neq 0
 241        0354    2                   then
 242        0355    2                       begin
 243        0356    2                       pagefaults = ..phastatbl [.i, fltsadr] - ..phastatbl [.i - 1, fltsadr];
 244        0357    2                       cputime [0] = ..phastatbl [.i, cputadr] - ..phastatbl [.i - 1, cputadr];
 245        0358    2                       ediv (cvt2secs, cputime [0], cpusecs [0], secfrac);
 246        0359    2                       ediv (cvtsecsmins, cpusecs [0], cpumins [0], cpusecs [0]);
 247        0360    2                       ediv (cvtsecsmins, cpumins [0], cpuhours, cpumins [0]);
 248      P 0361    2                       $fao (phastafmt, outlineleng, outbufdesc, .phastatbl [.i, textadr], .pagefaults, .cpuhours,
 249      P 0362    2                           .cpumins [0], .cpusecs [0], .secfrac,
 250      P 0363    2                           lnk$calcelaps (.phastatbl [.i - 1, stimadr],
 251        0364    2                               .phastatbl [.i, stimadr]));
 252        0365    2                       lnk$mapout (buffer, .outlineleng);
 253        0366    2                       end;
 254        0367
 255        0368    2               $adjwsl (pagcnt = 0, wsetlm = worksetlim);
 256        0369    2               memused = lnk$gl_memlhd;
 257        0370
 258        0371    2               while .memused [0] neq 0 do
 259        0372    2                   memused = .memused [0];
 260        0373
 261        0374    2               memused = (memused [0] - .lnk$gl_minaddr + 511)/512;
 262        0375    2               lnk$mapout (buffer, 0);
 263        0376    2               $fao (workset, outlineleng, outbufdesc, .worksetlim, .memused);
 264        0377    2               lnk$mapout (buffer, .outlineleng);
 265        0378    2               lnk$mapout (buffer, 0);
 266        0379    2               $fao (objrecs, outlineleng, outbufdesc, .lnk$gl_objrecs);
 267        0380    2               lnk$mapout (buffer, .outlineleng);
 268        0381    2               $fao (librecs, outlineleng, outbufdesc, .lnk$gl_librecs, .lnk$gw_dbgrecs, .lnk$gl_dbgestim);
 269        0382    2               lnk$mapout (buffer, .outlineleng);
 270        0383
 271        0384    2               if (dbgbytes = .lnk$gl_dstend) neq 0 and (.lnk$gl_ctlmsk [lnk$v_dbg] or .lnk$gl_ctlmsk [lnk$v_trace])
 272        0385    2               then
 273        0386    2                   begin
 274        0387    2                   $fao (dbgdata, outlineleng, outbufdesc, .dbgbytes, .lnk$gw_dstvbn, .lnk$gw_dstblks);
 275        0388    2                   lnk$mapout (buffer, .outlineleng);
 276        0389    2                   end;
 277        0390
 278        0391    2               lnk$mapout (buffer, 0);
 279        0392    2               $fao (extrmods, outlineleng, outbufdesc, .lnk$gl_nmodsexp);
 280        0393    2               lnk$mapout (buffer, .outlineleng);
 281        0394    2               $fao (srchmods, outlineleng, outbufdesc, .lnk$gl_nmodsrch);
 282        0395    2               lnk$mapout (buffer, .outlineleng);
 283        0396    2               lnk$mapout (buffer, 0);
 284        0397    2               $fao (futlsrch, outlineleng, outbufdesc, .lnk$gl_futlsrch);
 285        0398    2               lnk$mapout (buffer, .outlineleng);
 286        0399    2               lnk$mapout (buffer, 0);
 287        0400    2               $fao (symrecs, outlineleng, outbufdesc, (.lnk$gw_symrecs + .lnk$gw_gstrecs));
 288        0401    2               lnk$mapout (buffer, .outlineleng);
 289        0402    2               lnk$mapout (buffer, 0);                         ! SKIP A LINE
 290        0403    2               !
 291        0404    2               ! PRINT THE COMMAND LINE
```

LNK_STATSOUT
V04=000

H 11
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14-Sep-1984 12:40:36   [LINKER.SRC]LNKSTATSO.B32;1

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```
  292        0405  2 !
  293        0406           begin
  294        0407           local
  295        0408              pchars,
  296        0409              nchars,
  297        0410              chars;
  298        0411
  299        0412           pchars = 0;
  300        0413           cli$get_value(sd_$line, command_desc);          ! Get commmand line from CLI
  301        0414           chars = .command_desc [dsc$w_length];
  302        0415
  303        0416           while (.chars gtr 0) do
  304        0417  4           begin
  305        0418  4           nchars = min (.chars, len$c_mapline);
  306        0419  4           lnk$mapout (.command_desc [dsc$a_pointer] + .pchars, .nchars);
  307        0420  4           chars = .chars - .nchars;
  308        0421  4           pchars = .pchars + .nchars;
  309        0422  4           end;
  310        0423  3 !
  311        0424  3 ! PRINT THE OPTION FILE (IF PRESENT) if "/FULL" MAP REQUESTED
  312        0425  3 !
  313        0426  3         if .lnk$gl_ctlmsk [lnk$v_long]
  314        0427  3         then while .lnk$gl_optextp neq 0
  315        0428  4            do begin
  316        0429  4            lnk$mapout  (lnk$gl_optextp [oeb$t_text]           !PRINT THE LINE
  317        0430  4                         ,.lnk$gl_optextp [oeb$w_bytcnt]
  318        0431  4                        );
  319        0432  4            lnk$gl_optextp = .lnk$gl_optextp [oeb$l_nxtoeb];   !LINK TO NEXT LINE
  320        0433  4            end;
  321        0434  3
  322        0435  2         end;
  323        0436  2         return;
  324        0437  1         end;                                           ! End of LNK$STATSOUT


                                                              .TITLE   LNK_STATSOUT
                                                              .IDENT   \V04-000\

                                                              .PSECT   $PLIT$,NOWRT,NOEXE,2

                            45  4E  49  4C  24  00000 P.AAB:  .ASCII   \$LINE\
                                                    00005           .BLKB    3
                                       00000005. 00008 P.AAA:  .LONG    5
                                       00000000' 0000C          .ADDRESS P.AAB
65 63 6E 61 6D 72 6F 66 72 65 50 3C 30 35 21 00010 P.AAC:  .ASCII   \!50<Performance Indicators!>Page Faults-
61 50 3E 21 73 72 6F 74 61 63 69 64 6E 49 20 0001F           \<9>
                  09 73 74 6C 75 61 46 20 65 67 0002E
65 73 70 61 6C 45 09 65 6D 69 54 20 55 50 43 00038          .ASCII   \CPU Time\<9>\Elapsed Time\<0><0><0>
                  00 00 00 65 6D 69 54 20 64 00047
                                       0000003D 00050 PHASTAHD1:
                                                              .LONG    61
                                       00000000' 00054          .ADDRESS P.AAC
2A 31 31 21 3E 21 2D 2A 32 32 21 3C 30 35 21 00058 P.AAD:  .ASCII   \!50<!22*-!>!11*-\<9>\!8*-\<9>\!12*-\<0>
      00 2D 2A 32 31 21 09 2D 2A 38 21 09 2D 00067
                                       0000001B 00074 PHASTAHD2:
                                                              .LONG    27
                                       00000000' 00078          .ADDRESS P.AAD
```

```
09  4C  55  31  31  21  3E  21  53  41  21  3C  30  35  21   0007C  P.AAE:   .ASCII  \!50<!AS!>!11UL\<9>\!2ZL::2ZL::2ZL..!2ZL\
2E  4C  5A  32  21  3A  4C  5A  32  21  3A  4C  5A  32  21   0008B
                                                4C  5A  32  21   0009A
                                00  00  54  25  21  09   0009E           .ASCII  <9>\!%T\<0><0>
                                            00000026   000A4  PHASTAFMT:
                                                                        .LONG   38
                                            00000000'   000A8           .ADDRESS P.AAE
65  75  6C  61  76  20  6E  75  72  20  6C  61  74  6F  54   000AC  P.AAF:   .ASCII  \Total run values:\<0><0><0>
                                            00  00  00  3A  73   000BB
                                            00000011   000C0  TOTALTIM:
                                                                        .LONG   17
                                            00000000'   000C4           .ADDRESS P.AAF
6F  72  70  20  64  6E  61  6D  6D  6F  43  20  20  20  20   000C8  P.AAG:   .ASCII  \    Command processing:\<0>
                                        00  3A  67  6E  69  73  73  65  63   000D7
                                            00000017   000E0  COMANDTIM:
                                                                        .LONG   23
                                            00000000'   000E4           .ADDRESS P.AAG
                00  3A  31  20  73  73  61  50  20  20  20  20   000E8  P.AAH:   .ASCII  \      Pass 1:\<0>
                                            0000000B   000F4  PASS1TIM:
                                                                        .LONG   11
                                            00000000'   000F8           .ADDRESS P.AAH
2F  6E  6F  69  74  61  63  6F  6C  6C  41  20  20  20  20   000FC  P.AAI:   .ASCII  \      Allocation/Relocation:\<0><0>
            00  00  3A  6E  6F  69  74  61  63  6F  6C  65  52   0010B
                                            0000001A   00118  ALLOCTIM:
                                                                        .LONG   26
                                            00000000'   0011C           .ADDRESS P.AAI
                00  3A  32  20  73  73  61  50  20  20  20  20   00120  P.AAJ:   .ASCII  \      Pass 2:\<0>
                                            0000000B   0012C  PASS2TIM:
                                                                        .LONG   11
                                            00000000'   00130           .ADDRESS P.AAJ
66  61  20  61  74  61  64  20  70  61  4D  20  20  20  20   00134  P.AAK:   .ASCII  \    Map data after object module synopsi\
75  64  6F  6D  20  74  63  65  6A  62  6F  20  72  65  74   00143
                                69  73  70  6F  6E  79  73  20  65  6C   00152
                                            00  00  3A  73   0015C           .ASCII  \s:\<0><0>
                                            0000002A   00160  MAPTIM:  .LONG   42
                                            00000000'   00164           .ADDRESS P.AAK
6C  62  61  74  20  6C  6F  62  6D  79  53  20  20  20  20   00168  P.AAL:   .ASCII  \      Symbol table output:\
                                3A  74  75  70  74  75  6F  20  65   00177
                                            00000018   00180  STBTIM:  .LONG   24
                                            00000000'   00184           .ADDRESS P.AAL
67  6E  69  6B  72  6F  77  20  61  20  67  6E  69  73  55   00188  P.AAM:   .ASCII  \Using a working set limited to !UL pages\
6F  74  20  64  65  74  69  6D  69  6C  20  74  65  73  20   00197
                                73  65  67  61  70  20  4C  55  21  20   001A6
20  73  65  67  61  70  20  4C  55  21  20  64  6E  61  20   001B0           .ASCII  \ and !UL pages of data storage (excludin\
65  67  61  72  6F  74  73  20  61  74  61  64  20  66  6F   001BF
                                6E  69  64  75  6C  63  78  65  28  20   001CE
                                29  65  67  61  6D  69  20  67   001D8           .ASCII  \g image)\
                                            00000058   001E0  WORKSET:.LONG   88
                                            00000000'   001E4           .ADDRESS P.AAM
65  62  6D  75  6E  20  6C  61  74  6F  54  3C  30  35  21   001E8  P.AAN:   .ASCII  \!50<Total number object records read (bo\
64  72  6F  63  65  72  20  74  63  65  6A  62  6F  20  72   001F7
                                6F  62  28  20  64  61  65  72  20  73   00206
55  21  3E  21  3A  29  73  65  73  73  61  70  20  68  74   00210           .ASCII  \th passes):!>!UL\
                                                4C   0021F
                                            00000038   00220  OBJRECS:.LONG   56
                                            00000000'   00224           .ADDRESS P.AAN
55  21  20  68  63  69  68  77  20  66  6F  20  20  20  20   00228  P.AAO:   .ASCII  \    of which !UL were in libraries and !\
```

```
61  72  62  69  6C  20  6E  69  20  65  72  65  77  20  4C  00237
                    21  20  64  6E  61  20  73  65  69  72  00246
64  20  47  55  42  45  44  20  65  72  65  77  20  4C  55  00250
6E  6F  63  20  73  64  72  6F  63  65  72  20  61  74  61  0025F
                    55  21  20  67  6E  69  6E  69  61  74  0026E
                    00  73  65  74  79  62  00278
                                00000057  00280  LIBRECS:.LONG   87
                                00000000' 00284          .ADDRESS  P.AAO
45  44  20  66  6F  20  73  65  74  79  62  20  4C  55  21  00288  P.AAP:  .ASCII  \!UL bytes of DEBUG data were written,sta\
77  20  65  72  65  77  20  61  74  61  64  20  47  55  42  00297
            61  74  73  2C  6E  65  74  74  69  72  002A6
55  21  20  4E  42  56  20  74  61  20  67  6E  69  74  72  002B0          .ASCII  \rting at VBN !UW with !UW blocks allocat\
63  6F  6C  62  20  57  55  21  20  68  74  69  77  20  57  002BF
            74  61  63  6F  6C  6C  61  20  73  6B  002CE
                    00  00  64  65  002D8          .ASCII  \ed\<0><0>
                                00000052  002DC  DBGDATA:.LONG   82
                                00000000' 002E0          .ADDRESS  P.AAP
6D  20  66  6F  20  72  65  62  6D  75  4E  3C  30  35  21  002E4  P.AAQ:  .ASCII  \!50<Number of modules extracted explicit\
65  74  63  61  72  74  78  65  20  73  65  6C  75  64  6F  002F3
            74  69  63  69  6C  70  78  65  20  64  00302
        00  00  4C  55  21  20  3D  20  3E  21  79  6C  0030C          .ASCII  \ly!> = !UL\<0><0>
                                00000032  00318  EXTRMODS:
                                               .LONG   50
                                00000000' 0031C          .ADDRESS  P.AAQ
78  65  20  4C  55  21  20  6B  74  69  77  20  20  20  20  00320  P.AAR:  .ASCII  \    with !UL extracted to resolve undefi\
6F  73  65  72  20  6F  74  20  64  65  74  63  61  72  74  0032F
            69  66  65  64  6E  75  20  65  76  6C  0033E
        00  73  6C  6F  62  6D  79  73  20  64  65  6E  00348          .ASCII  \ned symbols\<0>
                                00000033  00354  SRCHMODS:
                                               .LONG   51
                                00000000' 00358          .ADDRESS  P.AAR
61  65  73  20  79  72  61  72  62  69  6C  20  4C  55  21  0035C  P.AAS:  .ASCII  \!UL library searches were for symbols no\
20  72  6F  66  20  65  72  65  77  20  73  65  68  63  72  0036B
            6F  6E  20  73  6C  6F  62  6D  79  73  0057A
72  61  72  62  69  6C  20  65  68  74  20  6E  69  20  74  00384          .ASCII  \t in the library searched\<0><0><0>
        00  00  00  64  65  68  63  72  61  65  73  20  79  00393
                                00000041  003A0  FUTLSRCH:
                                               .LONG   65
                                00000000' 003A4          .ADDRESS  P.AAS
20  4C  55  21  20  66  6F  20  6C  61  74  6F  74  20  41  003A8  P.AAT:  .ASCII  \A total of !UL global symbol table recor\
74  20  6C  6F  62  6D  79  73  20  6C  61  62  6F  6C  67  003B7
            72  6F  63  65  72  20  65  6C  62  61  003C6
00  6E  65  74  74  69  72  77  20  73  61  77  20  73  64  003D0          .ASCII  \ds was written\<0><0>
                        00  003DF
                                00000036  003E0  SYMRECS:.LONG   54
                                00000000' 003E4          .ADDRESS  P.AAT
                                00000000  003E8  PHASTATBL:
                                               .LONG   0
00000000G 00000000G 00000000' 00000000G 00000000G 00000000G 003EC          .ADDRESS LNK$GL_SPAGFLTS, LNK$GL_CPUSTIM, -
00000000' 00000000G 00000000G 00000000G 00000000' 00000000G 00404          LNK$GQ_STARTIM, COMANDTIM, -
00000000' 00000000G 00000000G 00000000G 00000000G 0000000^G 0041C          LNK$GL_PS1FLTS, LNK$GL_PS1CPUT, -
00000000' 00000000G 00000000G 00000000G 00000000' 0000000^G 0434          LNK$GQ_PS1STIM, PASS1TIM, LNK$GL_ALOFLTS, -
                    00000000G 00000000G 0000000 G 0044C          LNK$GL_ALOCPUT, LNK$GQ_ALOSTIM, ALLOCTIM, -
                                               LNK$GL_PS2FLTS, LNK$GL_PS2CPUT, -
                                               LNK$GQ_PS2STIM, PASS2TIM, LNK$GL_MAPFLTS, -
                                               LNK$GL_MAPCPUT, LNK$GQ_MAPSTIM, MAPTIM, -
                                               LNK$GL_STBFLTS, LNK$GL_STBCPUT, -
```

```
                                                    LNK$GQ_STBSTIM, STBTIM, LNK$GL_ENDFLTS, -
                                                    LNK$GL_ENDCPUT, LNK$GQ_ENDTIM
                              00000000  00458        .LONG   0
00000000G 00000000G 00000000' 00000000G 00000000G 00000000G 0045C  .ADDRESS LNK$GL_SPAGFLTS, LNK$GL_CPUSTIM, -
                              00000000G 00474        LNK$GQ_STARTIM, TOTALTIM, LNK$GL_ENDFLTS, -
                                                     LNK$GL_ENDCPUT, LNK$GQ_ENDTIM
                              00000064  00478 CVT2SECS:
                                                    .LONG   100
                              0000003C  0047C CVTSECSMINS:
                                                    .LONG   60

                                                    .PSECT  $OWN$,NOEXE,2

                              0000   00000 COMMAND_DESC:
                                                    .WORD   0
                                 00   00002         .BYTE   0
                                 02   00003         .BYTE   2
                              00000000   00004       .LONG   0

                                            SD_$LINE=            P.AAA
                                                    .EXTRN  LNK$GL_OPTEXTP, LNK$GL_CTLMSK
                                                    .EXTRN  LNK$GL_MINADDR, LNK$GL_MEMLHD
                                                    .EXTRN  LNK$GL_CPUSTIM, LNK$GL_FUTLSRCH
                                                    .EXTRN  LNK$GL_LIBRECS, LNK$GL_NMODSEXP
                                                    .EXTRN  LNK$GL_NMODSRCH
                                                    .EXTRN  LNK$GL_OBJRECS, LNK$GW_DBGRECS
                                                    .EXTRN  LNK$GL_DBGESTIM
                                                    .EXTRN  LNK$GW_DSTVBN, LNK$GW_DSTBLKS
                                                    .EXTRN  LNK$GL_DSTEND, LNK$GW_SYMRECS
                                                    .EXTRN  LNK$GW_GSTRECS, LNK$GQ_STARTIM
                                                    .EXTRN  LNK$GQ_ENDTIM, LNK$GQ_PS1STIM
                                                    .EXTRN  LNK$GQ_ALOSTIM, LNK$GQ_PS2STIM
                                                    .EXTRN  LNK$GQ_MAPSTIM, LNK$GQ_STBSTIM
                                                    .EXTRN  LNK$GL_PS1CPUT, LNK$GL_ALOCPUT
                                                    .EXTRN  LNK$GL_PS2CPUT, LNK$GL_MAPCPUT
                                                    .EXTRN  LNK$GL_STBCPUT, LNK$GL_PS1FLTS
                                                    .EXTRN  LNK$GL_ALOFLTS, LNK$GL_PS2FLTS
                                                    .EXTRN  LNK$GL_MAPFLTS, LNK$GL_STBFLTS
                                                    .EXTRN  LNK$GL_SPAGFLTS
                                                    .EXTRN  LNK$GL_ENDFLTS, LNK$GL_ENDCPUT
                                                    .EXTRN  CLI$GET_VALUE, LNK$CALCELAPS
                                                    .EXTRN  LNK$MAPOUT, LEN$C_MAPLINE
                                                    .EXTRN  LNK$K_LIBBLOCKS
                                                    .EXTRN  SYS$FAO, SYS$ADJWSL

                                                    .PSECT  $CODE$,NOWRT,2

                              0FFC  00000           .ENTRY  LNK$STATSOUT, Save R2,R3,R4,R5,R6,R7,R8,R9,-: 0291
                                                    R10,R11
          5B 00000000G  00  9E 00002    MOVAB   LNK$GL_CTLMSK, R11
          5A 00000000G  00  9E 00009    MOVAB   SYS$FAO, R10
          59 00000000G  00  9E 00010    MOVAB   LNK$MAPOUT, R9
          5B 00000000'  EF  9E 00017    MOVAB   PHASTATBL, R8
          5E    FF54     CE  9E 0001E    MOVAB   -172(SP), SP
       20 AE       84    8F  9A 00023    MOVZBL  #132, OUTBUFDESC                          : 0340
       24 AE       28    AE  9E 00028    MOVAB   BUFFER, OUTBUFDESC+4                      : 0341
             1C    AE    D4  0002D       CLRL    CPUTIME+4                                 : 0342
```

```
                              14    AE  D4  00030        CLRL     CPUSECS+4                        0343
                              0C    AE  D4  00033        CLRL     CPUMINS+4                        0344
                              7E    AE  D4  00036        CLRL     -(SP)                            0345
                              2C    AE  9F  00038        PUSHAB   BUFFER
                         69   02    FB  0003B        CALLS    #2, LNK$MAPOUT
                              20    AE  9F  0003E        PUSHAB   OUTBUFDESC                       0346
                              08    AE  9F  00041        PUSHAB   OUTLINELENG
                       FC68   C8    9F  00044        PUSHAB   PHASTAHD1
                         6A   03    FB  00048        CALLS    #3, SYS$FAO
                         7E   04    AE  3C  0004B        MOVZWL   OUTLINELENG, -(SP)               0347
                              2C    AE  9F  0004F        PUSHAB   BUFFER
                         69   02    FB  00052        CALLS    #2, LNK$MAPOUT
                              20    AE  9F  00055        PUSHAB   OUTBUFDESC                       0348
                              08    AE  9F  00058        PUSHAB   OUTLINELENG
                       FC8C   C8    9F  0005B        PUSHAB   PHASTAHD2
                         6A   03    FB  0005F        CALLS    #3, SYS$FAO
                         7E   04    AE  3C  00062        MOVZWL   OUTLINELENG, -(SP)               0349
                              2C    AE  9F  00066        PUSHAB   BUFFER
                         69   02    FB  00069        CALLS    #2, LNK$MAPOUT
                         52   01    D0  0006C        MOVL     #1, I                            0351
                53            52   04    78  0006F 1$:    ASHL     #4, I, R3                        0353
                            6843  9F  00073        PUSHAB   PHASTATBL[R3]
                              9E    D5  00076        TSTL     @(SP)+
                              03    12  00078        BNEQ     2$
                            0082  31  0007A        BRW      3$
                       04 A843  9F  0007D 2$:    PUSHAB   PHASTATBL+4[R3]                  0356
                54            9E    D0  00081        MOVL     @(SP)+, R4
                50            52   04    78  00084        ASHL     #4, I, R0
                       F4 A840  9F  00088        PUSHAB   PHASTATBL-12[R0]
                51            9E    D0  0008C        MOVL     @(SP)+, R1
                57            64   61    C3  0008F        SUBL3    (R1), (R4), PAGEFAULTS
                       08 A843  9F  00093        PUSHAB   PHASTATBL+8[R3]                  0357
                54            9E    D0  00097        MOVL     @(SP)+, R4
                       F8 A840  9F  0009A        PUSHAB   PHASTATBL-8[R0]
                51            9E    D0  0009E        MOVL     @(SP)+, R1
            18  AE            64   61    C3  000A1        SUBL3    (R1), (R4), CPUTIME
    10  56   10  AE    18  AE  0090  C8  7B  000A6        EDIV     CVT2SECS, CPUTIME, CPUSECS, SECFRAC     0358
    10  AE   08  AE    10  AE  0094  C8  7B  000AF        EDIV     CVTSECSMINS, CPUSECS, CPUMINS, CPUSECS  0359
    08  AE   55         08  AE  0094  C8  7B  000B9        EDIV     CVTSECSMINS, CPUMINS, CPUHOURS, CPUMINS 0360
                       0C A843  9F  000C2        PUSHAB   PHASTATBL+12[R3]                0364
                              9E    DD  000C6        PUSHL    @(SP)+
                       FC A840  9F  000C8        PUSHAB   PHASTATBL-4[R0]
                              9E    DD  000CC        PUSHL    @(SP)+
            00000000G  00          02    FB  000CE        CALLS    #2, LNK$CALCELAPS
                         50   DD  000D5        PUSHL    R0
                         56   DD  000D7        PUSHL    SECFRAC
                18   AE   DD  000D9        PUSHL    CPUSECS
                14   AE   DD  000DC        PUSHL    CPUMINS
                         55   DD  000DF        PUSHL    CPUHOURS
                         57   DD  000E1        PUSHL    PAGEFAULTS
                            6843  9F  000E3        PUSHAB   PHASTATBL[R3]
                              9E    DD  000E6        PUSHL    @(SP)+
                         3C   AE  9F  000E8        PUSHAB   OUTBUFDESC
                         24   AE  9F  000EB        PUSHAB   OUTLINELENG
                       FCBC   C8  9F  000EE        PUSHAB   PHASTAFMT
                         6A   0A    FB  000F2        CALLS    #10, SYS$FAO
                         7E   04    AE  3C  000F5        MOVZWL   OUTLINELENG, -(SP)               0365
```

LNK_STATSOUT
V04=000

M 11
16-Sep-1984 00:33:36   VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:40:36   [LINKER.SRC]LNKSTATSO.B32;1

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```
                      2C  AE  9F 000F9          PUSHAB  BUFFER
                      69  02  FB 000FC          CALLS   #2, LNK$MAPOUT
FF6A      52          01  08  F1 000FF  3$:     ACBL    #8, #1, I, 1$             0353
                      5E  DD 00105              PUSHL   SP                        0368
                      7E  D4 00107              CLRL    -(SP)
      00000000G       00  02  FB 00109          CALLS   #2, SYS$ADJWSL
                  52  00000000G  00  9E 00110   MOVAB   LNK$GL_MEMLHD, MEMUSED    0369
                      62  D5 00117  4$:         TSTL    (MEMUSED)                 0371
                      05  13 00119              BEQL    5$
                  52  62  D0 0011B              MOVL    (MEMUSED), MEMUSED        0372
                      F7  11 0011E              BRB     4$
      50          52  00000000G  00  C3 00120  5$:  SUBL3  LNK$GL_MINADDR, MEMUSED, R0  0374
                  50  01FF  C0  9E 00128        MOVAB   511(R0), R0
      52          50  00000200  8F  C7 0012D    DIVL3   #512, R0, MEMUSED
                      7E  D4 00135              CLRL    -(SP)                     0375
                      2C  AE  9F 00137          PUSHAB  BUFFER
                      69  02  FB 0013A          CALLS   #2, LNK$MAPOUT
                      52  DD 0013D              PUSHL   MEMUSED                   0376
                      04  AE  DD 0013F          PUSHL   WORKSETLIM
                      28  AE  9F 00142          PUSHAB  OUTBUFDESC
                      10  AE  9F 00145          PUSHAB  OUTLINELENG
                      FDF8  C8  9F 00148        PUSHAB  WORKSET
                      6A  05  FB 0014C          CALLS   #5, SYS$FAO
                  7E  04  AE  3C 0014F          MOVZWL  OUTLINELENG, -(SP)        0377
                      2C  AE  9F 00153          PUSHAB  BUFFER
                      69  02  FB 00156          CALLS   #2, LNK$MAPOUT
                      7E  D4 00159              CLRL    -(SP)                     0378
                      2C  AE  9F 0015B          PUSHAB  BUFFER
                      69  02  FB 0015E          CALLS   #2, LNK$MAPOUT
      00000000G       00  DD 00161              PUSHL   LNK$GL_OBJRECS            0379
                      24  AE  9F 00167          PUSHAB  OUTBUFDESC
                      0C  AE  9F 0016A          PUSHAB  OUTLINELENG
                      FE38  C8  9F 0016D        PUSHAB  OBJRECS
                      6A  04  FB 00171          CALLS   #4, SYS$FAO
                  7E  04  AE  3C 00174          MOVZWL  OUTLINELENG, -(SP)        0380
                      2C  AE  9F 00178          PUSHAB  BUFFER
                      69  02  FB 0017B          CALLS   #2, LNK$MAPOUT
      00000000G       00  DD 0017E              PUSHL   LNK$GL_DBGESTIM           0381
      7E  00000000G   00  3C 00184              MOVZWL  LNK$GW_DBGRECS, -(SP)
      00000000G       00  DD 0018B              PUSHL   LNK$GL_LIBRECS
                      2C  AE  9F 00191          PUSHAB  OUTBUFDESC
                      14  AE  9F 00194          PUSHAB  OUTLINELENG
                      FE98  C8  9F 00197        PUSHAB  LIBRECS
                      6A  06  FB 0019B          CALLS   #6, SYS$FAO
                  7E  04  AE  3C 0019E          MOVZWL  OUTLINELENG, -(SP)        0382
                      2C  AE  9F 001A2          PUSHAB  BUFFER
                      69  02  FB 001A5          CALLS   #2, LNK$MAPOUT
      50  00000000G   00  D0 001A8             MOVL    LNK$GL_DSTEND, DBGBYTES    0384
                      30  13 001AF              BEQL    7$
      05              6B  06  E0 001B1          BBS     #6, LNK$GL_CTLMSK, 6$
      27          02  AB  02  E1 001B5          BBC     #2, LNK$GL_CTLMSK+2, 7$
      7E  00000000G   00  3C 001BA  6$:         MOVZWL  LNK$GW_DSTBLKS, -(SP)     0387
      7E  00000000G   00  3C 001C1             MOVZWL  LNK$GW_DSTVBN, -(SP)
                      50  DD 001C8              PUSHL   DBGBYTES
                      2C  AE  9F 001CA          PUSHAB  OUTBUFDESC
                      14  AE  9F 001CD          PUSHAB  OUTLINELENG
                      FEF4  C8  9F 001D0        PUSHAB  DBGDATA
```

LNK_STATSOUT
V04=000

N 11
16-Sep-1984 00:33:36   VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:40:36   [LINKER.SRC]LNKSTATSO.B32;1

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```
          6A              06 FB 001D4          CALLS   #6, SYS$FAO
          7E     04       AE 3C 001D7          MOVZWL  OUTLINELENG, -(SP)            0388
                 2C       AE 9F 001DB          PUSHAB  BUFFER
          69              02 FB 001DE          CALLS   #2, LNK$MAPOUT
                 7E       D4 001E1      7$:    CLRL    -(SP)                          0391
                 2C       AE 9F 001E3          PUSHAB  BUFFER
          69              02 FB 001E6          CALLS   #2, LNK$MAPOUT
          00000000G       00 DD 001E9          PUSHL   LNK$GL_NMODSEXP                0392
                 24       AE 9F 001EF          PUSHAB  OUTBUFDESC
                 0C       AE 9F 001F2          PUSHAB  OUTLINELENG
                 FF30     C8 9F 001F5          PUSHAB  EXTRMODS
          6A              04 FB 001F9          CALLS   #4, SYS$FAO
          7E     04       AE 3C 001FC          MOVZWL  OUTLINELENG, -(SP)            0393
                 2C       AE 9F 00200          PUSHAB  BUFFER
          69              02 FB 00203          CALLS   #2, LNK$MAPOUT
          00000000G       00 DD 00206          PUSHL   LNK$GL_NMODSRCH                0394
                 24       AE 9F 0020C          PUSHAB  OUTBUFDESC
                 0C       AE 9F 0020F          PUSHAB  OUTLINELENG
                 FF6C     C8 9F 00212          PUSHAB  SRCHMODS
          6A              04 FB 00216          CALLS   #4, SYS$FAO
          7E     04       AE 3C 00219          MOVZWL  OUTLINELENG, -(SP)            0395
                 2C       AE 9F 0021D          PUSHAB  BUFFER
          69              02 FB 00220          CALLS   #2, LNK$MAPOUT
                 7E       D4 00223          CLRL    -(SP)                          0396
                 2C       AE 9F 00225          PUSHAB  BUFFER
          69              02 FB 00228          CALLS   #2, LNK$MAPOUT
          00000000G       00 DD 0022B          PUSHL   LNK$GL_FUTLSRCH                0397
                 24       AE 9F 00231          PUSHAB  OUTBUFDESC
                 0C       AE 9F 00234          PUSHAB  OUTLINELENG
                 B8       A8 9F 00237          PUSHAB  FUTLSRCH
          6A              04 FB 0023A          CALLS   #4, SYS$FAO
          7E     04       AE 3C 0023D          MOVZWL  OUTLINELENG, -(SP)            0398
                 2C       AE 9F 00241          PUSHAB  BUFFER
          69              02 FB 00244          CALLS   #2, LNK$MAPOUT
                 7E       D4 00247          CLRL    -(SP)                          0399
                 2C       AE 9F 00249          PUSHAB  BUFFER
          69              02 FB 0024C          CALLS   #2, LNK$MAPOUT
          50 00000000G    00 3C 0024F          MOVZWL  LNK$GW_SYMRECS, R0            0400
          51 00000000G    00 3C 00256          MOVZWL  LNK$GW_GSTRECS, R1
                 6140     9F 0025D          PUSHAB  (R1)[R0]
                 24       AE 9F 00260          PUSHAB  OUTBUFDESC
                 0C       AE 9F 00263          PUSHAB  OUTLINELENG
                 F8       A8 9F 00266          PUSHAB  SYMRECS
          6A              04 FB 00269          CALLS   #4, SYS$FAO
          7E     04       AE 3C 0026C          MOVZWL  OUTLINELENG, -(SP)            0401
                 2C       AE 9F 00270          PUSHAB  BUFFER
          69              02 FB 00273          CALLS   #2, LNK$MAPOUT
                 7E       D4 00276          CLRL    -(SP)                          0402
                 2C       AE 9F 00278          PUSHAB  BUFFER
          69              02 FB 0027B          CALLS   #2, LNK$MAPOUT
                 53       D4 0027E          CLRL    PCHARS                         0412
          00000000'       EF 9F 00280          PUSHAB  COMMAND_DESC                  0413
                 FC20     C8 9F 00286          PUSHAB  SD_$LINE
 00000000G       00      02 FB 0028A          CALLS   #2, CLI$GET_VALUE
          52 00000000'    EF 3C 00291          MOVZWL  COMMAND_DESC, CHARS           0414
                 52       D5 00298      8$:    TSTL    CHARS                         0416
                 28       15 0029A          BLEQ    10$
```

```
                    50              52  D0 0029C           MOVL    CHARS, R0                           : 0418
            00000000G 8F             50  D1 0029F           CMPL    R0, #LEN$C_MAPLINE
                                     05  15 002A6           BLEQ    9$
                    50      0000G    8F  3C 002A8           MOVZWL  #LEN$C_MAPLINE, R0
                    54              50  D0 002AD 9$:        MOVL    R0, NCHARS                          : 0419
                                    54  DD 002B0           PUSHL   NCHARS
                   00000000'FF43    9F 002B2              PUSHAB  @COMMAND_DESC+4[PCHARS]             : 0419
                    69              02  FB 002B9           CALLS   #2, LNK$MAPOUT
                    52              54  C2 002BC           SUBL2   NCHARS, CHARS                       : 0420
                    53              54  C0 002BF           ADDL2   NCHARS, PCHARS                      : 0421
                                    D4  11 002C2           BRB     8$                                  : 0416
                    23      01  AB  E9 002C4 10$:          BLBC    LNK$GL_CTLMSK+1, 12$                : 0426
                    50 00000000G    00  D0 002C8 11$:      MOVL    LNK$GL_OPTEXTP, R0                  : 0427
                                    1A  13 002CF           BEQL    12$
                    7E              04  A0  3C 002D1       MOVZWL  4(R0), -(SP)                        : 0430
                                    06  A0  9F 002D5       PUSHAB  6(R0)                               : 0429
                    69              02  FB 002D8           CALLS   #2, LNK$MAPOUT
                    50 00000000G    00  D0 002DB           MOVL    LNK$GL_OPTEXTP, R0                  : 0432
            00000000G 00             60  D0 002E2           MOVL    (R0), LNK$GL_OPTEXTP                : 0427
                                    DD  11 002E9           BRB     11$
                                    04 002EB 12$:          RET                                         : 0437
```

; Routine Size: 748 bytes,   Routine Base: $CODE$ + 0000


```
: 325          0438  1                                    
: 326          0439  1 end
: 327          0440  0 eludom
```

:
:
:
:

                        PSECT SUMMARY

:   Name   Bytes   Attributes
:
: $PLIT$ 1152 NOVEC,NOWRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
: OWN 8 NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
: $CODE$ 748 NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

:
:   Library Statistics
:
:   -------- Symbols --------   Pages   Processing
:   File   Total   Loaded   Percent   Mapped   Time
:
: _255DUA28:[SYSLIB]LIB.L32;1   18619   9   0   1000   00:02.0
: _255DUA28:[LINKER.OBJ]DATBAS.L32;1 538   6   1   28   00:00.8

```
;                              COMMAND QUALIFIERS

;        BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:LNKSTATSO/OBJ=OBJ$:LNKSTATSO MSRC$:LNKSTATSO/UPDATE=(ENH$:LNKSTATSO)

;  328            0441  0                              !End of module
;  Size:            748 code + 1160 data bytes
;  Run Time:        00:17.7
;  Elapsed Time:    00:54.4
;  Lines/CPU Min:   1499
;  Lexemes/CPU-Min: 15372
;  Memory Used:  217 pages
;  Compilation Complete
```